

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 03-552-C	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/US2004/031591	International filing date (day/month/year) 24/09/2004	(Earliest) Priority Date (day/month/year) 24/09/2003
Applicant  METHYLGENE, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

**4. With regard to the title,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regard to the drawings,**

- a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2004/031591

**Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)**

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
- a. type of material
- ☒ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☒ in written format
- ☒ in computer readable form
- c. time of filing/furnishing
- ☒ contained in the international application as filed
- ☒ filed together with the international application in computer readable form
- ☐ furnished subsequently to this Authority for the purpose of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

# INTERNATIONAL SEARCH REPORT

International Applicant No  
PCT/US2004/011591

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C237/40 C07C233/25 C07C235/58 C07C237/20 C07C255/60  
C07C323/42 C07D333/20 A61K31/16 A61K31/33 A61K31/381  
A61P35/00 C07D307/52 C07D409/12 C07D409/14 C07D333/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, BEILSTEIN Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 03/024448 A (METHYLGENE) 27 March 2003 (2003-03-27) claims; examples	82-352, 503 1,55
X A	WO 01/38322 A (METHYLGENE) 31 May 2001 (2001-05-31) cited in the application page 84, compound 86; pages 94 - 99; page 102; pages 108 - 109; page 112; pages 116 - 127; claims	82-352, 503 1,55
X A	EP 0 847 992 A (MITSUI CHEMICALS) 17 June 1998 (1998-06-17) cited in the application claims; examples	82-352, 503 1,55
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

4 February 2005

Date of mailing of the international search report

15/02/2005

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## INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/US2004/01591

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 01/16106 A (SCHERING) 8 March 2001 (2001-03-08) claims; examples -----	82-352, 503 1,55
X	SUZUKI ET AL: "Synthesis and Histone Deacetylase Inhibitory Activity of New Benzamide Derivatives" 1999, JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, PAGE(S) 3001-3003 , XP002158227 ISSN: 0022-2623 the whole document -----	82-352, 503
P,X	WO 03/087057 A (ASTRAZENECA) 23 October 2003 (2003-10-23) claims; examples -----	82-352, 503

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Continuation of Box II.1

Although claims 44-54, 71-81, 101-111, 132-142, 161-171, 190-200, 219-230, 248-258, 276-286, 305-315, 342-352, 367-277, 392-402, 417-427, 442-452, 467-477, 592-502 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

# INTERNATIONAL SEARCH REPORT

International Application No.  
PCT/US2004/031591

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
PCT/US2004/031591

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03024448	A	27-03-2003	BR 0212510 A	24-08-2004
			CA 2465978 A1	27-03-2003
			EP 1429765 A2	23-06-2004
			WO 03024448 A2	27-03-2003
			US 2004106599 A1	03-06-2004
			US 2004142953 A1	22-07-2004
WO 0138322	A	31-05-2001	AU 1876801 A	04-06-2001
			CA 2391952 A1	31-05-2001
			EP 1233958 A1	28-08-2002
			WO 0138322 A1	31-05-2001
			JP 2003514904 T	22-04-2003
			MX PA02005196 A	22-09-2003
			US 6541661 B1	01-04-2003
EP 0847992	A	17-06-1998	DE 69729626 D1	29-07-2004
			EP 1437346 A1	14-07-2004
			EP 0847992 A1	17-06-1998
			ES 2218645 T3	16-11-2004
			JP 3354090 B2	09-12-2002
			JP 10152462 A	09-06-1998
			JP 2002332267 A	22-11-2002
			US 6794392 B1	21-09-2004
			US 2004147569 A1	29-07-2004
			US 6174905 B1	16-01-2001
WO 0116106	A	08-03-2001	JP 2001081031 A	27-03-2001
			AU 773617 B2	27-05-2004
			AU 6841600 A	26-03-2001
			BG 106439 A	29-11-2002
			BR 0013648 A	07-05-2002
			CA 2382886 A1	08-03-2001
			CN 1371366 T	25-09-2002
			CZ 20020724 A3	17-07-2002
			EE 200200097 A	15-04-2003
			WO 0116106 A1	08-03-2001
			EP 1208086 A1	29-05-2002
			HK 1046277 A1	26-11-2004
			HR 20020182 A2	29-02-2004
			HU 0203330 A2	28-02-2003
			JP 2003508386 T	04-03-2003
			NO 20020952 A	20-03-2002
			NZ 517520 A	30-05-2003
			PL 353063 A1	06-10-2003
			SK 2612002 A3	10-09-2002
			US 6638530 B1	28-10-2003
			ZA 200201424 A	02-09-2002
WO 03087057	A	23-10-2003	BR 0308875 A	04-01-2005
			CA 2480356 A1	23-10-2003
			EP 1495002 A1	12-01-2005
			WO 03087057 A1	23-10-2003